

Chapter 4 ENVIRONMENTAL ANALYSIS

Introduction to the Analysis

Sections 4.1 through 4.12 of Chapter 4 of this EIR contain a discussion of the potentially significant environmental effects that may result from implementation of the Master Plans, including information related to existing environmental conditions, analyses of the type and magnitude of individual and cumulative effects that implementation of the proposed CIP projects may have on such existing environmental conditions, and feasible mitigation measures that could avoid or reduce environmental impacts to a less than significant level.

Scope of the EIR

The environmental factors set forth below would be potentially affected by the Master Plans, involving at least one effect that is a potentially significant impact, as discussed in Sections 4.1 through 4.12.

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|------------------------------------|-----------------------------------|
| ■ aesthetics | ■ greenhouse gases |
| ■ air quality | ■ hazards and hazardous materials |
| ■ biological resources | ■ hydrology/water quality |
| ■ cultural resources | ■ land use/planning |
| ■ energy | ■ noise |
| ■ geology, soils, and paleontology | ■ transportation/traffic |

The Master Plans would not result in one or more potentially significant impacts on the following environmental factors: agricultural resources, mineral resources, population and housing, public services, recreation, and utilities and service systems. The rationale for this determination is set forth in Chapter 5 of this EIR.

Several of the CIP projects identified in Chapter 2, Project Description, have been previously analyzed in compliance with CEQA in documents that have been certified or adopted by the City of Carlsbad. These CIP projects would only be needed if the development projects proposed in the CEQA documents are constructed. Table 4.0-1 summarizes the EIRs, Mitigated Negative Declarations (MND), and exemption that addressed the CIP projects, and identifies the CIP projects included in each document. Because the potentially significant impacts of these projects (and mitigation measures where necessary) have been identified in other CEQA documents, these projects are not included in the environmental analysis in

this EIR. Therefore, the potential environmental impacts that would result from Sewer CIP Projects SR-6, N-1, N-2, N-5, N-7, N-8, N-10, N-11, I-3, I-4, I-5, and I-6; Water CIP Projects 7, 8, 40, and R6; and Recycled Water CIP Project ES3 are not addressed in Sections 4.1 through 4.4, 4.6, or 4.8 through 4.12 of this EIR. The previous environmental documents did not adequately address energy demand or greenhouse gas emissions; therefore, these projects are addressed in Section 4.5, Energy, and Section 4.7, Greenhouse Gas Emissions. Refer to Table 4.0-1 for the environmental document that includes the impact analysis for the corresponding CIP project.

The Quarry Creek Master Plan EIR (EIR-11) that includes Water CIP Project N-9, Water CIP Project 55, and Recycled Water CIP Project ES7 is currently being prepared. The Vancouver Street HDD Sewer Pipeline MND is also currently being prepared and includes Sewer CIP Project SR-14. Because these documents have not yet been made available for public review, the environmental analysis of these CIP projects are addressed in this EIR.

Table 4.0-1 CIP Projects Included in Previous CEQA Documents

Previous Environmental Document	Project Description	Completion Date	Covered CIP Projects
Final EIR for the Robertson Ranch Master Plan (EIR 03-03, SCH #2004051039)	The proposed Robertson Ranch Master Plan project site is located in the northeastern quadrant of the City of Carlsbad. A majority of the 398-acre site is located on the north side of El Camino Real between Tamarack Avenue and Cannon Road; however, the project site also includes 39.7 acres of land north of College Boulevard and 9.5 acres south of Cannon Road. The Master Plan proposes a variety of land uses including a mixture of residential uses, a village center with a local shopping center and community facility use, a public school site, a public community park, recreational vehicle storage, trails, private recreation areas, water quality treatment facilities, and open space. The EIR included the infrastructure that would be provided to support the proposed land uses including circulation improvements, drainage and flood control, wet and dry utilities, water quality treatment facilities, trails, and other recreational areas. The Master Plan would allow for the construction of up to a maximum of 1,383 residential dwelling units of varying densities. Additionally, approximately 175,000 square feet of commercial and/or community facility uses is proposed. Other non-residential building square footage on the project site would include school buildings and recreational facilities.	Certified November 14, 2006 CC Resolution 2006-324	Sewer CIP Projects SR-6, N-5, and N-8 Water CIP Project 40
Final EIR for the Cantarini/ Holly Spring Developments (EIR 02-02, SCH #2002101081)	The project involves development of the adjacent Cantarini and Holly Springs residential subdivisions on 276.57 acres in the northeastern quadrant of the City of Carlsbad. The Cantarini Tentative Map proposes development of 105-single-family units and 80 multiple family units on the 156.72-acre property. One lot would be developed with 80 multiple family units on 7.2 acres. Within the Cantarini project, a total of 59.14 acres would be placed under a conservation easement as permanent open space. The Holly Springs Tentative Map would create 43 single-family residential lots. A total of 43 single-family residences would be developed on 0.5-acre lots over approximately 24.40 acres of the 119.85-acre property. Construction of infrastructure to support the development was included in the EIR, including sewer facilities, which would be installed concurrently with road improvements.	Certified December 7, 2004	Sewer CIP Projects N-1 and N-2

Table 4.0-1 CIP Projects Included in Previous CEQA Documents (continued)

Previous Environmental Document	Project Description	Completion Date	Covered CIP Projects
Final EIR for the Dos Colinas Project (EIR 09-01, SCH # 2009111085)	The proposed Dos Colinas project consists of 55.7 gross acres of land located in the northeast quadrant of the City of Carlsbad, north of the intersection of Sunny Creek Road and College Boulevard, north of El Camino Real, and south of Cannon Road. The proposed project consists of two separate sites: 1) the Continuing Care Retirement Community (CCRC; also defined as a Professional Care Facility under Carlsbad Municipal Code) site; and, 2) an affordable housing site. The CCRC site would be developed with a total of 309-units which include a mixture of detached cottages, as well as independent and assisted living units. A portion of the CCRC site will also be developed to accommodate the relocation of an existing offsite recreational vehicle (RV) storage and garden area to serve the residents of Rancho Carlsbad Estates. The affordable housing site would be developed with a 29-unit affordable housing complex located on a noncontiguous parcel located approximately 400 feet south of the CCRC site. Construction of infrastructure to support the development was included in the EIR, including sewer facilities, which would be installed concurrently with road improvements.	Certified January 10, 2012 CC Resolution 2011-285	Sewer CIP Project N-7
Calavera Hills Master Plan Phase II, Bridge and Thoroughfare District No. 4, & Detention Basins Final EIR (EIR 98-02, SCH #99111082)	The project is located in the northeast quadrant of the City of Carlsbad. The 819-acre Calavera Hills Master Plan area is adjacent to the Oceanside City limit. The Master Plan's western extent is near Carlsbad Village Drive and the easterly boundary is just west of Lake Calavera. The project consists of three components: (1) an amendment of Calavera Hills Master Plan to accommodate residential, commercial, and community facility land uses; (2) extensions to College Boulevard (Reaches A-C) and Cannon Road (Reaches 3 and 4) within the City of Carlsbad Bridge & Thoroughfare District No. 4; and (3) two detention basins within the Calavera Creek watershed. College Boulevard would be extended from within the Calavera Hills Master Plan at Carlsbad Village Drive southerly to El Camino Real (approximately 9,500 feet). Cannon Road would be extended from El Camino Real easterly to the City of Oceanside (approximately 9,100 feet). Construction of infrastructure to support the development was included in the EIR, including sewer and recycled water facilities, which would be installed concurrently with road improvements and other development.	Completed November 2001	Sewer CIP Project N-11 Water CIP Projects 7 and 8 Recycled Water CIP Project ES3
Agua Hedionda Sewer Lift Station & Gravity & Force Mains MND (SCH #2010081053)	The project proposes the installation of a sewer trunk line (3,960-foot long force main and a 8,420-foot long gravity sewer line), a sewer lift station (50 million gallons/day capacity,) and a sewer support bridge (140-foot weathered steel span) improvements on the Vista/Carlsbad Sewer Interceptor System, segments VC11, VC12, VC13, VC14, and VC15 (as referenced in the 2003 Sewer Master Plan). The proposed project extends a total distance of approximately 12,380 linear feet (2.35 miles) in a north-south direction located in coastal Carlsbad from the Agua Hedionda Lagoon to the Encina Water Pollution Control Facility. The project also includes a number of associated improvements in the same work area, including installation of a recycled water line, replacement of a potable water line, demolition of an existing sewer lift station and concrete overflow basin, demolition of the wood trestle for the existing sewer line and the option of relocating a section of an existing high pressure gas transmission line from its existing trestle bridge to the new sewer bridge.	Adopted October 5, 2011 PC Resolution 6816 CC Resolution 2011-276	Sewer CIP Projects I-3, I-4, I-5

Table 4.0-1 CIP Projects Included in Previous CEQA Documents (continued)

Previous Environmental Document	Project Description	Completion Date	Covered CIP Projects
Buena Vista Lift Station Sewer Force Main (VC-4) MND (SCH #2009021085)	The project proposes the installation of a new parallel segment of underground sewer force main for a total distance of approximately 4,200 linear feet; installation of a new resin liner to approximately 2,400 linear feet of existing pipeline; and abandonment of approximately 600 linear feet of an existing sewer force main. The force main project extends from the Buena Vista Lift Station southerly to the Jefferson Street/Marron Road intersection, then westerly up Jefferson Street west of the Marron Road intersection to approximately 180 feet easterly of 1-5.	Adopted November 4, 2009 PC Resolution 6644	Sewer CIP Project I-6
Ponto Beachfront Village Vision Plan Final EIR (EIR 05-05, SCH #2007031141)	The Ponto Beachfront Village Vision Plan Area is located within the City of Carlsbad. The Vision Plan Area is an approximately 130-acre area located between Carlsbad Boulevard to the west and the San Diego Northern Railroad (SDNR) tracks and right-of-way to the east. Portions of the plan area extend north to Poinsettia Lane and south to La Costa Avenue. The Vision Plan proposed a land use mix that would include a live-work neighborhood, a townhouse neighborhood, a mixed-use center, a beachfront resort, a garden hotel, and a village hotel. Proposed community amenities include trails east and west of Carlsbad Boulevard, a multi-purpose trail, and connection to the regional trail system. A Wetland Interpretive Park was proposed, along with a community facility-nature/arts center. Construction of infrastructure to support the proposed land uses was included in the EIR, including sewer facilities, which would be installed concurrently with road improvements and other development.	Certified November, 2007	Sewer CIP Project N-10
Notice of Exemption – CMWD Project No. 5025 – Maerkle Reservoir Pressure Control Hydroelectric Facility	The project proposed installation of a pressure control hydroelectric generator (including underground piping) within an 18 feet by 18 feet pre-cast concrete building, and installation of associated underground piping. The project was determined to qualify for a Class 3, Section 15303 Categorical Exemption – installation of new small equipment and facilities, and the conversion of existing small structures from one use to another.	Filed October 26, 2011	Water CIP Project R6
Notice of Exemption – EA 10-10 – Terramar Lift Station and Force Main Replacement	The project proposed the removal of the existing Terramar Lift Station and replacement of the sewer lift station and force main with like facilities of similar capacity. The force main included the construction of approximately 400 linear feet of new pipeline parallel to the existing pipeline, which would be abandoned in place. The remaining 150 linear feet of the existing force main would be rehabilitated in place. The project was determined to be a Class 2, Section 15302(c) Categorical Exemption – replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.	Filed July 21, 2011	Sewer CIP Project SR-10
Notice of Exemption – CDP 11-07/CUP 11-02 – Home Plant Lift Station and Force Main Replacement	The project proposed the construction of a new sewer lift station and associated piping at 2359 Carlsbad Boulevard, within portions of Maxton Brown Park, and within the public rights-of-way on Carlsbad Boulevard, State Street, Laguna Drive and Jefferson Street. The project was determined to be a Class 2, Section 15302(c) Categorical Exemption – replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.	Filed June 15, 2012	Sewer CIP Project SR-25

Format of the Environmental Effects Analysis

The potentially significant environmental effects of the Master Plans are analyzed in Sections 4.1 through 4.12 by considering the conditions, principles, and standards, and by using the methodology set forth below.

Environmental Setting

As provided in Section 15125 of the CEQA Guidelines, the analysis includes a description of the existing physical environmental conditions in the vicinity of the proposed CIP projects, as of the date that the Notice of Preparation of this EIR was published, namely January 31, 2012. This description of the existing environment establishes the environmental baseline. The environmental baseline is the starting point for the analysis of the Master Plans' environmental effects and it enables a meaningful assessment of the significance of such effects.

Regulatory Framework

The analysis also provides a summary of applicable federal, state, and local laws, regulations, plans and policies that are relevant to each environmental factor affected by the Master Plans.

Impacts and Mitigation

The analysis describes the potentially significant environmental impacts of the proposed CIP projects and, based upon the identified standards of significance, determines whether the environmental impacts are considered significant and unavoidable, potentially significant but reduced to a less than significant level with mitigation or less than significant without mitigation. Each environmental factor that is analyzed is divided into specific issues, based on potential impacts. The discussion of potential impacts is based upon the applicable threshold of significance for each issue. Where potentially significant impacts are identified, mitigation measures are included to avoid or reduce the potential impact to a level below significance.

Standards of Significance

As the lead agency, the City of Carlsbad is responsible for determining whether an adverse environmental effect identified in the EIR is potentially significant or less than significant. Significance standards may vary depending on the nature of the area affected and, as a result, the definition of what is a significant environmental effect must be flexible. In determining standards of significance, lead agencies can obtain assistance from experts, a lead agency's policies, performance standards adopted by regulatory agencies, significance standards recommended by regulatory agencies, and the lead agency's own judgment, among other things. In addition, lead agencies may use the standards set forth in Appendix G to the CEQA Guidelines as a basis for defining significance thresholds in an EIR.

The standards of significance used in this analysis are primarily based upon the recommendations provided in Appendix G of the CEQA Guidelines. The threshold of significance defines the type, amount, and/or extent of impact that would be considered a significant adverse change in the environment. The standards of significance for some environmental factors, such as air quality and noise are quantitative, while those for other topics, such as landform alteration/visual quality, are qualitative. The standards of significance are intended to assist the reader in understanding how and why an EIR determines whether an impact is potentially significant or less than significant.

Impact Analysis

As a program EIR, this EIR focuses the analysis of environmental impacts on the approval and implementation of the Master Plans and their proposed CIPs, recognizing that the individual CIP projects will be subject to later environmental analysis under CEQA when and if such projects are ready for approval, at which time issues unique to specific projects will be analyzed in detail in project specific second tier CEQA analysis, whether in the form of an EIR, negative declaration, or addendum. As required by Section 15126.2(a) of the CEQA Guidelines, direct and indirect potentially significant effects will be identified and described, while taking short-term and long-term effects into consideration. As required by CEQA Guidelines Section 15126.2, this EIR identifies and focuses on the potentially significant effects of the proposed Master Plans. In assessing the impact of the Master Plans on the environment, the City of Carlsbad will limit its examination to changes in the physical environment in the affected area from the environmental baseline discussed within the Environmental Setting section above. Both direct and reasonably foreseeable indirect significant effects of the Master Plans on the environment are identified and described, giving due consideration to both long term and short term effects. The EIR provides an analysis that is sufficient to enable the City to make an informed judgment concerning the potential effects of the proposed Master Plans on the environment.

In drawing conclusions concerning an environmental analysis, such as whether a particular environmental effect is significant, CEQA depends upon the accumulation of substantial evidence in the record to support the conclusions, findings, and determinations made by the reviewing agency. In effect, substantial evidence is defined as “enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though another conclusion might also be reached” (CEQA Guidelines Section 15384(a)). Substantial evidence includes facts and reasonable inferences from the facts and expert opinion supported by facts; it does not include argument, speculation, conjecture, or unsubstantiated opinion (California Public Resources Code Sections 21080(e) and 21082.2(c)). When an EIR cannot provide meaningful information on future activities within a program, detailed environmental assessment can be deferred until such activities are ripe for approval. The individual CIP projects proposed in the Master Plans are together intended to enable the City and CMWD to reliably meet current, planned and projected land use demands in their service areas up to 2035. However, individually, the CIP projects would provide infrastructure addressing either localized demand or components of a larger program strategy to meet projected demand on a broad scale. The details concerning individual CIP projects and whether they would ultimately be built at all depends upon growth patterns which are actually realized in the service areas, water supply, conservation measures, and other factors affecting demand. Indeed, growth patterns are themselves subject to many factors, such as changes in the area wide employment base, settlement characteristics, socio-economic trends, transportation, and environmental constraints, among others.

Due to the uncertainty of future events and the ultimate character of projected growth and growth related development, project descriptions for the “site-specific” and individual CIP projects that would be implemented to meet resulting demand are, for the most part, similarly uncertain, particularly for the later phases of the Master Plans. The project descriptions for these “site-specific” individual CIP projects will be defined as the need for the CIP project becomes apparent and the project is proposed for approval. Accordingly, as provided in CEQA Guidelines Section 15168, this EIR addresses the environmental impacts, alternatives, and mitigation measures that can be meaningfully assessed at the program level (i.e., at the level of the Master Plans). The analysis of issues unique to the “site-specific” individual CIP projects would, as appropriate, be conducted at a later time in accordance with CEQA

prior to the approval of such projects, which analysis would be focused by tiering from the environmental analysis conducted in this EIR.

The individual CIP projects would be examined by the City in light of the EIR to determine whether an additional environmental document must be prepared. For CIP projects that would have effects that were not examined in the EIR, the City or CMWD would prepare a new initial study leading to either an EIR or a negative declaration. If the City finds, pursuant to CEQA Guidelines Section 15162, no new effects could occur or no new mitigation measures would be required for a CIP project, the City can make a determination that the CIP project is covered by this EIR, and no new environmental document would be required. The City and CMWD would incorporate all applicable feasible mitigation measures and alternatives developed in the EIR into subsequent CIP projects together with any new mitigation measures or alternatives adopted as a part of the second tier CEQA project specific analysis.

This EIR utilizes the following terms to describe the level of significance of impacts identified during the course of the environmental analysis:

- ***Less than Significant:*** This term is used when an environmental effect would not exceed the defined standards of significance, namely 1) when the effect is not a substantial or potentially substantial adverse change to the environment, and 2) when potentially significant impacts are reduced to a level which is less than significant after implementation of mitigation measures.
- ***Potentially Significant:*** This term is used to refer to impacts on the environment resulting from implementation of the Master Plans that exceed the defined standards of significance before identification of mitigation measures. A “significant effect” is defined by Section 15382 of the CEQA Guidelines as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment [but] may be considered in determining whether the physical change is significant.” For impacts that exceed a threshold of significance, feasible mitigation measures that avoid or reduce the potential impact are identified.
- ***Significant and Unavoidable:*** This term is used to refer to significant impacts resulting from implementation of the proposed Master Plans that cannot be eliminated or reduced to below standards of significance through implementation of feasible mitigation measures.

Mitigation Measures

Section 15126.4 of the CEQA Guidelines requires an EIR to “describe feasible measures which could minimize significant adverse impacts.” The CEQA Guidelines define “feasible” as a quality attributable to an action capable of being accomplished in a successful manner within a reasonable period of time taking into account economic, legal, social, technological, or other considerations. The EIR will identify and describe mitigation measures that could reduce the severity of potentially significant impacts identified as part of the Impact Analysis.

Cumulative Impacts and Mitigation

Cumulative impacts are defined in the CEQA Guidelines as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”

So, a cumulative impact is a change in the physical environment that results from the incremental effect of the project when added to other past, present, and reasonably foreseeable future projects. In determining whether a project's cumulative effects are significant, two determinations are required:

1. Is the combined impact of the project and other projects significant?
2. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. Is the project's incremental effect cumulatively considerable? The CEQA guidelines allow for a project's contribution to be rendered less than cumulatively considerable with implementation of mitigation measure(s) designed to alleviate the cumulative impacts.

An EIR's discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence. However, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone and should be guided by the standards of practicality and reasonableness.

The geographic scope of the cumulative impact analysis varies depending upon the specific environmental topic being analyzed. In accordance with CEQA Guidelines Section 15130(b)(3), Table 4.0-2 summarizes the geographic area within which past, present, and reasonably foreseeable future projects may contribute to a specific cumulative impact, when considered in conjunction with the impacts associated with implementation of the proposed Master Plans.

Table 4.0-2 Geographic Scope of Cumulative Impact Analyses

Environmental Topic	Geographic Scope of Cumulative Impact Analyses
Aesthetics	The geographic context for the analysis of cumulative impacts to visual character, scenic vistas, and scenic resources encompasses the public viewsheds from which above-ground CIP projects would be visible. The geographic context for the analysis of cumulative impacts relative to night lighting encompasses the urban areas within the sewer, water, and recycled water service areas (Carlsbad, San Marcos, Oceanside, and Vista).
Air Quality	The geographic scope of cumulative impact analysis for criteria air pollutants is the San Diego Air Basin. The geographic context for the analysis of cumulative impacts relative to sensitive receptors is the sewer, water, and recycled water service areas. Impacts relative to objectionable odors are limited to the area immediately surrounding the odor source and are not cumulative in nature because the air emissions that cause odors disperse beyond the sources of the odor.
Biological Resources	The geographic scope of cumulative impact analysis for biological resources includes the sewer, water, and recycled water service areas, which encompasses a large region of Northern San Diego County and represents a wide variety of habitat types and sensitive biological resources, including a comprehensive list of species of regional concern. With the exception of a single project, all CIP projects potentially affecting biological resources occur within the city of Carlsbad; therefore, an appropriate geographic scope for the cumulative impact analysis would encompass areas contained within the planning boundaries for the Carlsbad HMP. For federally listed species whose critical habitat occurs within the CMWD service area (e.g., coastal California gnatcatcher), the geographic scope would include all contiguous critical habitat units that extend beyond the boundaries of the city of Carlsbad.

Table 4.0-2 Geographic Scope of Cumulative Impact Analyses (continued)

Environmental Topic	Geographic Scope of Cumulative Impact Analyses
Cultural and Paleontological Resources	The geographic context for the analysis of cumulative impacts to archaeological and historic resources and human remains includes the sewer, water, and recycled water service areas, which includes approximately 40-square miles of land with a similar archaeological, ethnohistoric, and historic setting as the individual CIP project sites. The geographic context for the analysis of cumulative impacts to paleontological resources encompasses the paleontologically sensitive geologic formations within the sewer, water, and recycled water service areas.
Energy	The City sewer and CMWD water and recycled water service areas are the geographic scope of cumulative for energy.
Global Climate Change	Due to the nature of assessment of greenhouse gas emissions and the effects of climate change, impacts can currently only be analyzed from a cumulative context; therefore, the geographic scope for the cumulative analysis of global climate change is the global atmosphere for greenhouse gas emissions.
Geology and Soils	The geographic context for the analysis of cumulative impacts relative to soil erosion encompasses the Carlsbad and San Luis Rey watersheds directly downstream from the proposed CIP construction sites. Impacts relative to seismic hazards and other geologic/soil conditions (i.e., fault rupture, groundshaking, ground failure, liquefaction/collapse, landslides, lateral spreading, subsidence, and expansive soils) and septic systems are generally site-specific.
Hazards and Hazardous Materials	The geographic context for the analysis of cumulative impacts relative to the transport, use and disposal of hazardous materials, and associated accidental releases, encompasses the roadways and freeways used by vehicles transporting hazardous materials to and from the CIP construction sites, and the CIP project sites that involve the use of hazardous materials. The geographic context for the analysis of cumulative impacts relative to wildland fires and emergency response and evacuation plans is the sewer, water, and recycled water service areas. Impacts relative to listed hazardous materials sites and airport hazards are generally specific to the CIP project sites.
Hydrology/ Water Quality	The geographic context for the analysis of cumulative impacts relative to water quality standards and alteration of drainage patterns encompasses the portions of the Carlsbad watershed directly downstream from the CIP project locations. The geographic context for the analysis of various cumulative water quality and hydrological impacts relative to localized alteration of drainage patterns encompasses the San Luis Rey River groundwater basin. Impacts relative to mudflows, dam inundation, tsunamis, seiches, and flood hazard areas are generally specific to a project site.
Land Use/ Planning	Incompatibilities with adjacent land uses are generally site specific; therefore, the geographic context for the analysis of cumulative impacts relative to adjacent land use incompatibilities includes development characteristics surrounding proposed CIP facilities. The geographic context for the analysis of cumulative impacts relative to physical division of an established community is generally site specific and limited to the area directly adjacent to each CIP site.
Noise	The area of cumulative impact that would be considered for the noise and vibration cumulative analysis would be only those cumulative projects within the immediate vicinity of the proposed CIP locations. Exposure to aircraft noise is also a localized impact and the area of cumulative impact that would be considered for aircraft impacts would be only those projects located within two miles of Palomar-McClellan Airport or Oceanside Municipal Airport.
Transportation/ Traffic	The geographic scope of the cumulative analysis related to traffic and LOS standards, traffic hazards, alternative transportation, and emergency access is the sewer, water, and recycled water service areas. Impacts related to aircraft traffic are generally specific and limited to the area within two miles of a specific airport.

CEQA Guidelines Section 15130(b) indicates the following approaches for identifying cumulative projects:

- A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

The cumulative analysis for this EIR uses the latter of the two approaches listed above. For each environmental topic addressed in Chapter 4 of this EIR, the regional or area-wide conditions and cumulative projects contributing to a particular cumulative impact (as identified and projected in the relevant general plans of jurisdictions located within and adjacent to the CIP project area) is considered as part of the baseline when evaluating the proposed CIP project's contribution to that cumulative impact. In accordance with CEQA Guidelines Section 15130(b)(5), a determination is made regarding the significance of the baseline cumulative impact (prior to considering the cumulative contribution of the Master Plans) resulting from the full range of regional or area-wide conditions and cumulative projects that occur within the specific geographic areas described in Table 4.0-2. A Summary Box provides the reader with the issue statement, a description of the cumulative impact, the significance of the baseline cumulative impact, and whether or not the proposed Master Plans' contribution to this impact is cumulatively considerable (before and after implementation of mitigation measures).

Projections based on adopted general or regional plans were included in the consideration of cumulative projects for the Master Plans. All cities and counties in California are required by state law to create and adopt a general plan that covers each jurisdiction's entire planning area. This plan must address a broad range of issues associated with development, including the identification of growth projections for future population and employment within the county or city. In San Diego County, SANDAG maintains the most current economic, demographic, land use, and transportation data projections for the county and incorporated cities, based on cities' general plans. The following planning documents were also considered in the analysis of cumulative impacts: 1) Carlsbad General Plan, 2) Vista General Plan, 3) San Marcos General Plan, 4) Oceanside General Plan, and 5) Vallecitos Water District Water, Wastewater, and Recycled Water Master Plan.

1. The Carlsbad General Plan is available for review on the City of Carlsbad's website: <http://www.carlsbadca.gov/services/departments/planning/pages/general-plan.aspx>.
2. The Vista General Plan is available for review at the City of Vista's website: <http://www.cityofvista.com/departments/communitydev/GeneralPlanUpdate2030.cfm>.
3. The San Marcos General Plan is available for review at San Marcos City Hall, 1 Civic Center Drive, San Marcos, California 92069.
4. The Oceanside General Plan is available for review on the City of Oceanside's website: <http://www.ci.oceanside.ca.us/gov/dev/planning/general.asp>.
5. The Vallecitos Water District Water, Wastewater, and Recycled Water Master Plan was also considered because one of the CIP projects in this plan is an outfall pipeline that traverses Carlsbad along Palomar Mountain Road and Poinsettia Lane that is proposed to be

developed in phases between 2014 and 2030. The Master Plan is available for review on the Vallecitos Water District website:
<http://www.vwd.org/uploads/Chapter%208,%20Proposed%20CIP.pdf>.

Tables 4.0-3 through 4.0-5 provide a summary of the growth, employment and housing projections for these jurisdictions based on SANDAG 2050 Regional Growth Forecast data. The 2050 Regional Growth Forecast is based on land use inputs gathered from the region's eighteen incorporated cities and the county. These inputs include current adopted general and community plans, and draft general plan updates, as provided by the local land use authority (SANDAG 2010).

References

This subsection identifies sources relied upon for each environmental factor and/or effect analyzed in Chapter 4 of this EIR.

Table 4.0-3 Anticipated Increase in Population (2010-2035)

Jurisdiction/Community	Existing Population (2010) ⁽¹⁾	Forecasted Population (2035) ⁽²⁾	% Change (2010-2035)
City of Carlsbad	106,804	125,293	17
City of San Marcos	84,391	103,110	22
City of Oceanside	183,095	212,213	16
City of Vista	97,513	117,471	20

⁽¹⁾ Source: SANDAG 2012

⁽²⁾ Source: SANDAG 2010

Table 4.0-4 Anticipated Increase in Jobs (2008-2035)

Jurisdiction/Community	Existing Total Employment (2008)	Forecasted Employment (2035)	% Change (2008-2035)
City of Carlsbad	61,999	80,999	31
City of San Marcos	37,383	51,040	37
City of Oceanside	43,977	57,710	31
City of Vista	41,315	53,891	30

Source: SANDAG 2010

Table 4.0-5 Anticipated Increase in Housing Units (2010-2035)

Jurisdiction/Community	Existing Total Housing Units (2010) ⁽¹⁾	Forecasted Total Housing Units (2035) ⁽²⁾	% Change (2010-2035)
City of Carlsbad	43,844	50,208	15
City of San Marcos	27,744	33,421	20
City of Oceanside	64,758	73,599	14
City of Vista	30,716	36,061	17

⁽¹⁾ Source: SANDAG 2012

⁽²⁾ Source: SANDAG 2010

References

- City of Carlsbad. 2001. Calavera Hills Master Plan Phase II, Bridge and Thoroughfare District No. 4, & Detention Basins Final Environmental Impact Report (EIR 98-02, SCH #99111082). November.
- City of Carlsbad. 2004. Final Environmental Impact Report for the Cantarini/ Holly Spring Developments (EIR 02-02, SCH #2002101081). October.
- City of Carlsbad. 2006. Final Environmental Impact Report for the Robertson Ranch Master Plan (EIR 03-03, SCH #2004051039). April.
- City of Carlsbad. 2007. Ponto Beachfront Village Vision Plan Final Environmental Impact Report (EIR 05-05, SCH #2007031141). August.
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